

## Comparison between different contraceptive methods

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**Keywords—** Contraceptives. Types of  
contraceptives. Drug interactions. Antibiotics  
and Contraceptives. Women's health.

**Abstract—** Contraceptive methods are directly related to women's health and, consequently, involve family planning issues and a whole process of social awareness. This work aims to carry out a bibliographical survey about the comparison between contraceptive methods; explain the classification between contraceptive methods; demonstrate the importance of consciously choosing the method that best suits individual needs; assess drug interactions between contraceptives and antibiotics; elucidate the importance of family planning and contraception. For the preparation of this article, the Integrative Review was used as a methodological tool in order to systematize and theoretically support this research from literature related to the proposed theme. Problems such as the proper choice of contraceptive method, unwanted pregnancies, STI's, family planning, awareness about the use of contraceptive methods and drug interactions were discussed throughout the article. The ideal is that dual protection (condom and contraceptive) be used in all sexual relations, thus contributing to increasingly minimize the rates of STI's and HIV/AIDS. It is necessary that there is greater discussion and dissemination in society in regarding the different types of contraceptive methods and the correct way to use them, as well as possible consequences of their absence, possible health risks and benefits. awareness about the use of contraceptive methods and drug interactions with them. The ideal is that dual protection (condom and contraceptive) be used in all sexual relations, thus contributing to increasingly minimize the rates of STI's and HIV/AIDS. It is necessary that there is greater discussion and dissemination in society in regarding the different types of contraceptive methods and the correct way to use them, as well as possible consequences of their absence, possible health risks and benefits. awareness about the use of contraceptive methods and drug interactions with them. The ideal is that dual protection (condom and contraceptive) be used in all sexual relations, thus contributing to increasingly minimize the rates of STI's and HIV/AIDS. It is necessary that there is greater discussion and dissemination in society in regarding the different types of contraceptive methods and the correct way to use them, as well as possible consequences of their absence, possible health risks and benefits.

## I. INTRODUCTION

By defining contraception, in short, it is envisaged the use of measures or methods that have the objective of preventing pregnancy as a result of a sexual relationship. The contraceptive method is an important tool with regard to family planning, serving as support for both men and women [1].

From Law No. 9263/1996, the Brazilian State began to have an obligation to each individual to provide free access to various contraceptive methods through health centers, with due professional monitoring through the services offered by the Basic Unit of Health of each location. It is a service that operates mainly among the lower social classes and is not only operational, but also serving as an important source of information [2].

One of the main ways of classifying contraceptive methods is to divide them into two groups: reversible and definitive. The group of reversibles includes intrauterine, hormonal and emergency devices. As for the definitive ones, tubal ligation and vasectomy are evidenced. It is observed that certain contraceptive methods, such as male and female condoms, in addition to contributing positively to better family planning, also act as inhibitors of sexually transmitted infections (STIs) and AIDS [1].

In recent decades, more democratic access to contraceptive methods, especially in the poorest strata of the population, including as a duty of State, this assistance in family planning, triggered a reduction in birth rates and also in STI/AIDS, which were already quite out of control 3 decades ago. The change in social roles, with women having a more active profile in the labor market, and no longer reductionist as a

"housewife", has served to improve and popularize contraceptive methods in the last two decades, mainly [3].

Given the above, the general objective of this study is to carry out a literature review on the proposed theme, the comparison between contraceptive methods. Therefore, the specific objectives are listed: to explain the classification between contraceptive methods; demonstrate the importance of consciously choosing the method that best suits individual needs for preventing unwanted pregnancies and protecting against STIs; assess the most common drug interactions and adverse reactions between contraceptives and antibiotics; elucidate the importance of family planning and contraception to prevent maternal and fetal deaths resulting from an unwanted pregnancy.

Aiming to achieve these objectives and the proposed

problematic, this study has a qualitative research character and the Integrative Review was used as a methodological tool. The theme proposed in this study is extremely important as it addresses a theme of broad social relevance and which involves different sectors involving different public policies from the social area, when observing family planning, as in the health area, when it affects STI/AIDS.

In view of this scenario, it is possible to see that this study stimulates new scientific and academic research related to the theme, since it is about women's health, which affects the family constitution and society in general. It is noteworthy that it is necessary that knowledge about the various contraceptive methods is accessible to society, where benefits and harms are presented, in the face of specialized clinical guidance.

## II. MATERIAL AND METHOD

The present study is an Integrative Review, and, according to Souza, presents itself as a tool that guides the search for the theoretical foundation of the proposed theme according to the search [4].

The research carried out for the development of this article took place on the Google Academic virtual platform, where related literatures published mostly in the SciELO and LILACS databases and in journals in the health area were located.

During the literature search process, the following keywords were used to guide the search: contraceptives; drug interactions; Antibiotics and Contraceptives; types of contraceptives.

Altogether, 09 articles were selected for the preparation of this study among 30 surveyed. The inclusion criteria used for the selection of these articles, in addition to the proximity to the proposed theme, were the date of publication of the research (last 5 years) and the places of publication of the same. The excluded articles were eliminated due to lack of approach to the theme.

## III. RESULTS

Next, in order to better understand the theoretical framework that make up this study, a table is presented containing a brief summary of selected literature where it is possible to visualize the proximity to the theme proposed here, as well as copyright information. The flowchart below shows the result of the search for articles used to discuss the topic in question.

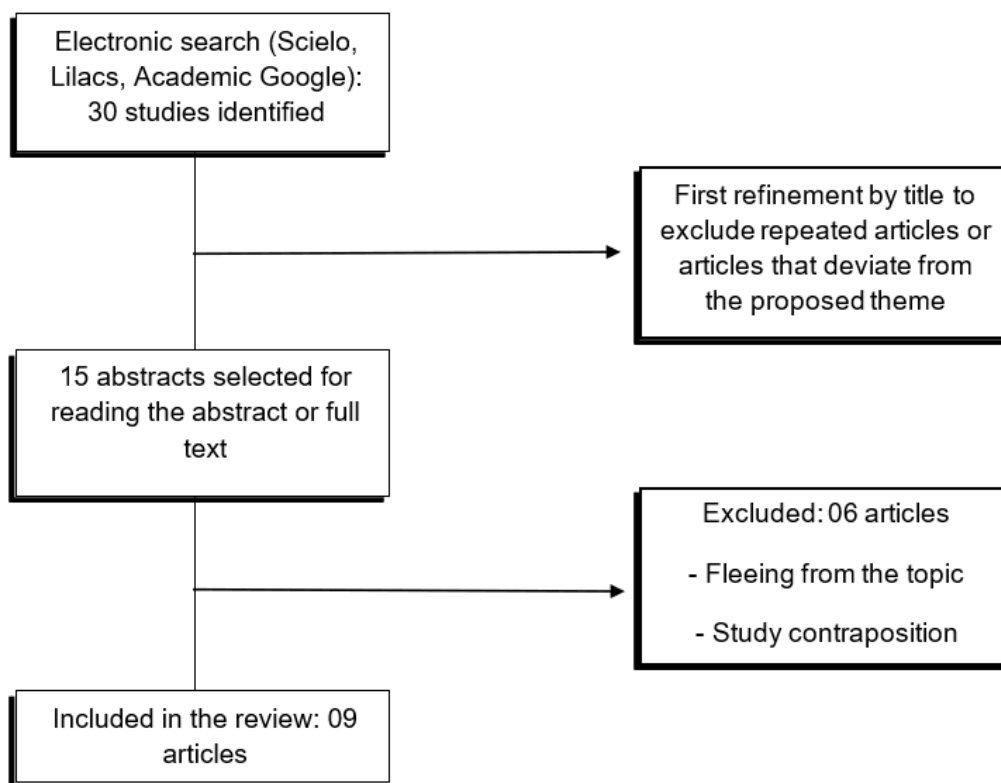


Fig.1: Article search flowchart

Source: The authors, 2021.

Table 1. Summary of selected articles and main information about them.

TITLE	AUTHOR / YEAR / JOURNAL	ODOLOGY	SAMPLE	RESEARCH PURPOSE	RESULTS
Work and family: repercussions of social transformations in human relationships	[3] Dignity Re-Viewed, [Ps], v. 1, no. 2, p.10, dec. 2016. ISSN 2525-698X.	Bibliographic research.	Various literatures referring to the subject.	Addressing social changes related to work and family.	From the feminist revolution and with women's conquest of rights in the public sphere, changes in family dynamics emerged, loosening ties with the interactional modes of the traditional family.
Contraception and family planning: dissemination of knowledge and availability of contraceptive methods	[1] Course Conclusion Paper presented to the Specialization Course in Primary Health Care at the Federal University of Maranhão/UNASUS - São Luís, 2017	Intervention project.	Family planning groups, with a multidisciplinary team and users.	Implement actions to prevent unwanted pregnancies, guiding men and women of childbearing age on the proper use of contraceptive methods.	The approach to preventing unwanted pregnancies and the broad spectrum of meaning of family planning, due to the great demand for knowledge shown by the population, made the adherence to operative groups and the increase in the level of knowledge on the subject to reach a satisfactory result.
Drug Interactions between	[9] Id on Line Rev. Psic.	Qualitative research.	396 female drugstore	Check the profile of use and	It is possible to conclude that there is a lack of knowledge

Antibiotics and Contraceptives, present in Medical Prescriptions.	V.11, No. 35.May/2017 - ISSN 1981-1179.		customers.	recognition of possible drug interactions between antibiotics and contraceptives.	among the interviewees about the possible drug interactions that exist when in association with antimicrobials and oral and injectable contraceptives.
Links between contraception, sexuality and gender relations.	[5] Revista Saúde e Sociedade, v.26, n.4, São Paulo, 2017.	Bibliographic research.	Various literatures related to the subject.	This is a theoretical article that seeks to contribute to the debate on contraceptive culture in Brazil.	The proposed reflections highlight the need to consider gender asymmetries and the underlying biographical, contextual and cultural mediations in the processes that engender a reproductive event.
Drug interaction between contraceptives and antibiotics.	[10] Scientific Exhibition of Pharmacy, [SI], v. 5, March. 2019. ISSN 2358-9124.	Descriptive exploratory bibliographic study.	Various literatures on the subject found on Google Scholar.	Review the interaction in the scientific literature Between antibiotics and contraceptives.	The decrease in the effectiveness of oral contraceptives is based on the action of antibiotics on the resident intestinal microbiota during the drug metabolism process.

Mode and intensity of use of hormonal contraceptives by students and teachers at a higher education institution.	[7] Nucleus of Knowledge Multidisciplinary Scientific Journal. Year 03, Ed. 08, Vol.08, pp. 35-55, August 2018. ISSN:2448-0959.	Field research.	82 academic participants or collaborators from higher education.	Provide an assessment of contraceptive methods that are used by women in a Higher Education Institution, checking how their use occurs and the possibility of adverse/side effects or even problems related to the medication.	Contraceptive hormones can pose a threat if used inappropriately. The preference for combined oral contraceptives should be based on a personal diagnosis of each woman, which takes into account the method of life, routine, physical characteristics and personal goals.
(Lack of) knowledge of women about the use of contraceptive methods.	[8] UFPE Nursing Journal online. Recife, 13(5):1354-60, May, 2019.	Descriptive qualitative study.	Sixteen women assisted in a Basic Health Unit.	To analyze the knowledge of women from the coastal lowlands about the use of contraceptive methods.	It was evident that women demonstrated knowledge about the contraceptive methods used by them, however, they did not always use them correctly.

Knowledge of students about sexually transmitted infections and contraceptive methods.	[6] UFPE Nursing Journal online. 2019;13:e242261.	Qualitative study.	153 schoolchildren aged 11 to 16 years, of both sexes.	Assess the level of knowledge of students about Sexually Transmitted Infections and contraceptive methods.	It is noticed the precariousness of information that students have on the topic of sexuality.
Reproductive Planning: Profile of adherence to contraceptive methods.	[two] AL. Brazil J. Hea. Rev., Curitiba, v. 3, n. 5, p. 14996-15010, Sept./Oct. 2020. ISSN 2595-6825.	Case study.	148 customers, 142 female and 6 male.	Identify the profile of choice and adherence to specific contraceptive methods offered at the Integrated Reference Center for Women's Health in the municipality of Marabá, state of Pará.	Health education measures in the scope of Primary Care should be encouraged for the social dissemination of other contraceptive methods and a probable reduction in rates due to the choice of surgical methods.

Source: Empirical research data, Salvador, Bahia, Brazil, 2021.

#### IV. DISCUSSION

##### Comparison and classification between different contraceptive methods

From Table 1 presented above, it was possible to collect the authors' opinions about the main points involved in this discussion. To start this chapter, it is worth remembering that there are different ways of the possibility of a classification between contraceptive methods. According to the medical-sanitary logic, emphasis is placed on the criterion of effectiveness of each method [5].

Also according to the author, this classification has a relativized character, as it depends on the personal experience of each individual. Coitus withdrawal is an example, which, despite being ineffective in practice, many studies demonstrate an expressive effectiveness in couples who do not want pregnancy.

In a more general spectrum, it can be stated that contraceptive methods are classified as follows: hormone-based (pill, vaginal ring, injections); barrier (condom and diaphragm); temporary (IUD); chemicals (spermicides); surgical (sterilization and vasectomy); natural (calendar and withdrawal) [5].

Also according to the author, such classifications allow for greater assertiveness regarding the proper use of contraceptives. By observing the subjectivity of each

individual, planning with a higher qualitative index is allowed.

##### Contraceptive methods: Awareness process and appropriate choice

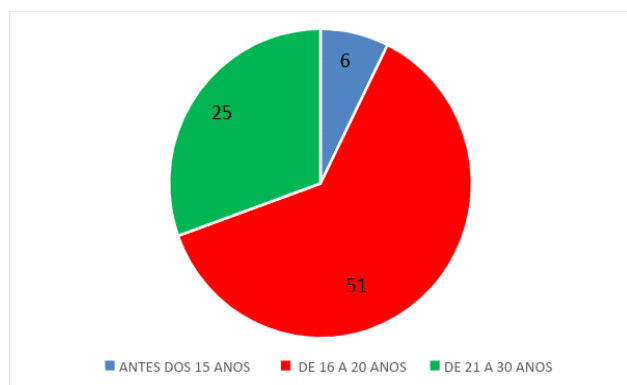
Admitting that the process of initiation of sexual life occurs earlier than it did decades ago, there is a need for sexual education, as well as the information process about contraceptive methods, to occur at school, in a didactic form and without taboos [6].

The authors also point out that the lack of sexual education during their initiation period can dramatically increase the risk of an unwanted pregnancy even in adolescence, altering a complete personal and professional trajectory, in addition to greater exposure to STI's.

A survey carried out by Santos et. al. points out that, among the women participating in the study, most started using contraceptives aged between 16 and 20 years, as shown in the following chart [7]:



Fig.1 – Graphic representation of women whose contraceptive methods.



Source: SANTOS ET. AL. (2018, p.7).

The use of hormonal contraceptives by young people who are starting their sex life, as shown in the figure, is a very sensitive event, which needs a lot of information regarding the most appropriate choice, paying attention to topics such as possible drug interactions, pregnancy unwanted and preventing STI's. The lack of information in a discovery phase, more prone to impulsive choices, can lead to negative consequences [7].

The main means of accessing information about contraceptive methods, and which allow the woman or couple to more consciously choose the most appropriate method according to their reality, is the health system [8].

The authors also emphasize that, in addition to access to information, the health system must have an adequate supply of the desired method, in addition to using simple language that optimizes the use of the chosen contraceptive.

The gateway to information and diagnosis of the best conception or contraceptive method, depending on family planning, is the health system of each location, given the decentralization of the SUS, which allows for better adaptation to each socioeconomic and cultural context. In the Family Health Units (USF), the citizen must find access to information, easy to understand, in addition to continuous monitoring through constant educational actions, in addition to medical assistance [5].

### Unwanted Pregnancy and STI

There is a consensus that points to youth as the main susceptible group for both the occurrence of unwanted pregnancies and STIs, due to the period full of new experiences, including the beginning of sexual life, often without proper information regarding the methods contraceptives and their purposes [5].

The author also points out that the lack of information

among younger people about contraceptive methods can lead to a greater risk of contracting STIs. This risk is explained by the use of hormonal contraceptive methods in women or vasectomy in men, for example, prioritizing the annulment of an unwanted pregnancy and leaving aside the condom, the main contraceptive method to combat STIs.

WHO defines simultaneous protection against unwanted pregnancy and STIs as "dual protection". This concept is implemented when female or male condoms are used in conjunction with another contraceptive method (pill, injectable, vasectomy, IUD, diaphragm, tubal ligation). Ideally, double protection should be used in all sexual relations, thus contributing to increasingly minimize the rates of STI's and HIV/AIDS, public health issues in the world [2].

An early and unwanted pregnancy entails a series of interruptions in plans and dreams for those involved in this process, which may in the future generate negative consequences even for the person from such pregnancy, which may even repeat the same cycle of parents at birth and growing up in an environment of misinformation [8].

### Family planning

Family planning is understood to be an attitude based on information about the factors surrounding fertility. This posture concerns the increase or limitation of offspring, based on equal rights for men, women and couples [8].

The role of the State as an ally in family planning began more directly, in 1984, with the establishment of the Comprehensive Assistance Program for Women's Health (PAISM), created by the Ministry of Health. In addition to the focus on prevention and diagnosis gynecological, the PAISM contains educational actions related to Family Planning and Contraceptive Methods, with a personalized approach, aiming to assist women of the most varied social, economic and cultural profiles [2].

The next regulatory framework related to family planning is law 9263, of January 12, 1996. This law differs from previous actions, as it includes the family planning agenda not only as a policy related to women, but also with the man and the couple [1].

Currently, the State is legally obligated to inform people about issues such as family planning and the most appropriate methods of both conception and contraception, in addition to offering them in the health network for all individuals [5].

The author also emphasizes that the role of informing must be enhanced through an articulation between health and education, which allow teenagers, still of school age, access to educational content regarding contraceptive methods and the concept of family planning, thus providing

, more aware adults and more prepared for the initiation of their sexual life.

Adequate family planning is of fundamental importance, especially for underdeveloped countries that have a high rate of poverty and inequality, factors that pressure public spending on social programs for income transfer, for example. The neglect with this issue causes a growing demand for social programs, demanding an increasingly higher public spending [1].

### Drug interactions: contraceptives and antibiotics

Aiming at a better understanding of the theme proposed in this topic, the concept of Drug Interaction is presented according to Mendonça and Rodrigues (2017, p.7): "Drug Interactions are understood as changes in expected pharmacological effects as a result of changes in its pharmacokinetics and/or pharmacodynamics" [9].

When given together, contraceptives and antibiotics can be reduced and even nullified. The scientific explanation, according to the authors, is as follows [9]:

Due to the reformulation of the oral contraceptive, there was a reduction in the concentration of estrogens and progestins leading to a desensitization of this drug when used concomitantly with the antibiotic, which is possible due to the significant loss of the intestinal microbiota, thus decreasing the plasma concentration of the oral contraceptive and, consequently, its effectiveness (P.1).

The issue of drug interaction between contraceptives and antibiotics is currently one of the topics considered of high relevance and has been the subject of several studies among health professionals [10].

The aforementioned author and author also emphasize that it is the responsibility of the health professional responsible for the prescription of the drug, whether a doctor or drug, for being specialized, to inform the patient about drug interactions and guide him to the correct use, and there are cases in which the absence of these instructions is noted.

The studies under analysis, such as the one by Mendonça and Rodrigues (2017), Gomes et. al. (2018) and Ferrera et. al. (2019) showed in its entirety that the pharmacist is the professional who works for the patient to receive their ideal treatment. Together with other medical professionals, the latter aims to ensure that the correct medication is administered to the patient, and thus directly contributes to saving lives [08, 09, 10].

## V. CONCLUSION

Given what was exposed throughout this study, it was possible to infer, from the research, a context in which there is still a lot of work to be done in the sense of raising

awareness about the different contraceptive methods. Despite involving the couple, the issue of contraceptive methods is still closely related to a public policy aimed at women.

There is a shift in direction, but the focus still remains. There is also a dangerous misinformation with regard to young people, who are starting their sexual life, either because of taboos in the family or the lack of sex education at school, which makes it difficult to better understand the different contraceptive methods and their purposes.

Such misinformation makes them more susceptible to not using the double protection recommended by the WHO and which allows the prevention of both unwanted pregnancies and STIs.

There has been a regulatory advance over the last decades in the sense of placing the State as a protagonist in actions that help the population with information about contraceptive methods, including their free offer at health centers, and also in relation to family planning.

Despite the progress in the legislative sense, it is still clear that the adequate provision of these services is still precarious for the population of lower social classes, who depend solely on the SUS.

This disparity creates an environment where the incidence of greater poverty ends up being more vulnerable, even with issues such as unwanted pregnancy, often still in adolescence and a greater risk of occurrence of STIs due to the lack of information and monitoring of the health service.

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